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WATER SUPPLY OUTLOOK FOR MONTANA

and
FEDERAL. STATE - PRIVATE COOPERATIVE SNOW SURVEYS
Collaborating with

MONTANA AGRICULTURAL EXPERIMENT STATION

MAY 1, 1980



Issued by

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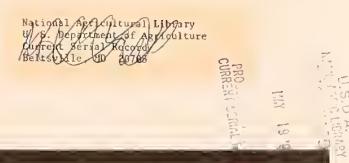
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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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FIRST CLASS MAIL



STATEWIOE SNOWPACK

Most areas have between 40 and 65 percent of average snow water content. Due to the prolonged above normal temperatures, the high elevation snowpack is melting earlier than normal this year.

Snowfall during April was below average in most areas. Usually about 95 of the 210 snow courses measured on May 1 show an increase in water content during April. This year only 8 snow courses increased. Snow in lower elevations is generally gone with many low elevation snow course notes reporting, "NO SNON".

A few snow courses will be measured on May 15 and June 1, with most of the information on mountain conditions and status of snowmelt being obtained from SNOTEL reports. Currently, there are 45 operational SNOTEL sites in Nontana reporting snow water content, precipitation and temperature twice daily.

STATEWIOE STREAMFLOW

Streamflow in April was generally near or above average due to the early snowmelt. Streamflow for the spring and summer months is forecast to be well below average in most areas, generally in the range of 45 to 65 percent of average. Runoff is about two to three weeks early this season.

The Kootenai Rivor, with headwaters in British Columbia where snowpack is a little better than in Montana drainages, is expected to have runoff about 80 to 85 percent of average. The Milk, St. Mary's, and portions of the Ruby, Madison, Gallatin and Yellowstone River drainages should have 70 to 75 percent of average runoff.



WATER SUPPLY SHORTAGE

The water supply outlook has deteriorated because of earlier than normal melt and lack of high elevation snowfall in April. The streamflow is expected to be quite low on streams and rivers not having stored water and low water is expected to come earlier this season. Good conservation practices will be required to stretch this short supply:

- Keep ditches clean and in good repair.
- Repair leaks in sprinkler equipment.
- Don't over irrigate. Apply the proper amount of water at the proper time.
- Adjust fertilizer rates to crop needs and available moisture supplies.
- Arrange for supplemental feed or pasture corly.
- Contact the local Soil Conservation District for additional assistance.

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→ Dipinoge Boundary A Gaging Station	The state of the s
% 1963-77 AVERAGE	N C
Over 130%	
110 - 130%	Tallaction (1)
90 -110%	11015
70-90%	MONTANA PROSPECTIVE STREAM - TORSECASTS
	PROSPECTIVE STREAMFLOW FORECASTS
Under 70%	3(4) h 1413

PUBLIC MEETINGS

We have received no additional information relative to the Sccretary of Agriculture's decision on how the Snow Survey and Water Supply Forecast Program will be managed. We will pass this decision on as soon as it becomes available.



SNOW SURV	VEY DATA
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4				N	W	SU	R
DRAINAGE BASIN M-4/or SNOW COURSE		Data of Survey	Shirt Des (Inche)	th Water Contr	• eler Co	nimi (inche)	1
ABUNDANCE LAKE	8800		45			25.0	_
ARCH FALLS BAUGER PASS	7350 6900	4/29	26 70	9, 8 33, 8	14.2	16.7	
BALO EAGLE PEAK BALO MOUNTAIN (WY)	5700 9600		94 42	48.4 15.5	22.3	65.4	
BALD RIOGE BANFIELO MOUNTAIN	7500 5600	4/27	17 32	6.7 14.4	_	14.7 24.4	
BAREE CREEK	5600 5500	5/01	SP 54	13.0 27.3		20.5	
BAREE TRAIL	4600 3800	5/01	43	18.7	32.0	35.1 1.8	
BASSOO PEAK	7180 5150	5/01	16	4.3	12.2	7.7	
BEAGLE SPRINGS BEAGLE SPRINGS PILLOW	8850 8850	4/25	23 SP	6.9	10.3	-	
BEAR BASIN BEAR MOUNTAIN (ID) BEAR PAW SKI AREA	8150 5400 5200	4/27	3B 90 0	15.4 46.8	22.0 45.9 15.0	25.6 67.7	
BEAVER LAKE BIG CREEK	5900 6750	5/01	41 85	17.2 43.4	25.4	25.9	
BIG SKY BIG SKT MENOOW	7700 6350	4/30	27	11.0	15.7	52.2 19.4	
HIG SNOWY BIG SPRINGS (ID)	7150 6500	4/25	42 12	16.3 9.4	29.4 12.6	3.9 28.0 17.7	
BLACK BEAR BLACK BEAR PILLOW	7950 7590	4/29	76 SP	35.6 32.8	42.6 38.7	45.4	
BLACK MOUNTAIN BLACK PINE	7750 7 1 00	5/02 4/28	30 14	10.8 5.4	21.4	16.2	
BLACK PINE PILLOW BLOODY DICK	7100 7600	4/28 4/29	SP 18	8.4 6.8	16.1 17.0	16.7 15.7	
BLUE LAKE BLOOOY DICK PILLOW	7600 5900	4/29 5/01	SP 39	5.1 16.4	15.B 27.6	26.1	
BOTS SOTS BOULDER MOUNTAIN	8000 7950	4/30	19 38	6.8 16.0	7.6 24.6	12.B 23.4	
BOX CANYON	7950 6670	4/2B 4/2B	SP 17	16.0 6.3	24.4	B.5	
BOX CANYON PILLOW BOXELOER CREEK	5100	4/2B 4/2B	SP 0	4.5 .0	7.2 10.8	6.4	
BRAUHAM LAKES BRIOGEK BOWL	8850 7250	4/30 5/01	53 40	21.B 17.6	31.8 31.3	36.4 34.3	
BRIDGER BOWL PILLOW BRISTOW CREEK	7250 3900	5/01 4/27	SP 0	14.7	32.2	32.8	
BRUSH CREEK TIABER BULL MOUNTAIN	5000 6600	4/28 5/02	. 3	.7	10.4	8.1 3.3	
BURGESS R.S. #2 (WY) CABIN CREEK CALL ROAD	5200	5/02	0	3.4	7.3 6.2	2.2	
CALVERT CREEK CALVERT CREEK PILLOW CAMP MISERY	8050 6450	4/25 4/30	33 10	3,4	14.2 11.6	11.3	
CAMP MISERY CAMP SENIA CANYON (WY)	6400	77 60	91	42.0	7.0 51.2	1.9 55.4	
CANYON (WY) CARROT BASIN	1130	4/30 5/01	-0	0	8.2	10.6	. 2
CAHROT BASIN PILLOW CEDAR GROVE	9000	4/28	SP	25,4	-	44.4 33.5	F
CHESSMAN RESERVOIR CHICKEN CREEK	6200 4060	4/27 4/27 4/29	7 1 0	2.1	7.5		
CLOVER MEADOW COLE CREEK COLE CREEK PILLOW	8600 7850	4/25	40 54	.0 16.4	6.9 18.7 25.2	21.7	
COLLEY CREEK PILLOW	7850	4/29 5/02	SP 0	16.3	22.6	22.5	
COLLEY CREEK -COMBINATION COMBINATION PILLOW COUNE STATION	5600 5600	4/28	0 SP	.0	6.0	6.3 3.0	
COLLEG BOLLOB	5200	5/01 5/01	34	14.4	6.0 4.2 23.2 11.3	2.9	
COLLEK CALL	5200 6950	5/01 5/01	SP 35	.8 14.9	15.8 34.2	6.0 7.7 34.3	
COPPER CAMP PILLOW COPPER CREEK	6950 5700	5/01	SP 5	17.8	16.8	37.9	
COPPER LAKE CREEK COPPER MOUNTAIN	6100 7700	5/01 5/01	29 18	11.6 5.1	29.4	25.2	
COTTONWOOD CREEK COTOTE HILL CRTSTAL LAKE	6400 4200	5/04 5/01	4	1.4	13.4 3.5	8.4	
CRYSTAL LAKE PILLOW	6100 6100	4/25 4/25	18 SP	6,2 5.5	12.9	15.2	
DALY CREEK DALY CREEK DARKHORSE LAKE	8400 7600	4/28	41 12	15,6 3,3		18.1	
DARKHORSE LAKE OAVIS CREEK	5780 8600	4/28	19 48	7.5 21.0	14.0 28.6	13.8 31.8	
DEADMAN CREEK DEADMAN CREEK PILLOW	5400 6450	4/27 5/01	40 0	18.9	18.5 12.0		
DESERT MOUNTAIN DEVILS SLIDE	6450 5600	4/26	SP 25	.0 9.9	11.4	7.6	
DISCOVERY BASIN	8100 7050 7800	4/28	47 17	19.2 6.8	16.6 24.6 13.4	29.3 11.2	
DIX HILL DIVIOE PILLOW	7800 6400		24 \$P	8.2 10.6	13.4 10.9 11.7	12.0 13.9	
EAST BOULOER S EAST FORK R.S.	9250 5400	5/01	0 51	21.0A	9.5 37.5	5.1 36.5	
ELK HORN SPRINGS ELK PEAK	7800 8000		0 6	.0 1.9	.0 13.3 20.8	9.7	
EMERY CREEK PILLOW	4350	4/30 4/26 4/26		12.4 6.6	4.9	6.7	
FAITT CREEK FISH CREEK	\$500	5/01 4/29	49	20.9	32.8		
FISHER CREEK PILLOW	9100 9100	5/02	19 75	33.0	14.0 40.8	12.7 45·1	
FIVE SPRINGS FALLS (WY)	7500 5700	4/30 5/01	SP 2	28.9	37.9	41.9 8.3	
FLATTOP MOUNTAIN PILLOW FLEECER RIUGE	6300 7500	5/01 5/02	O SP	44.7	4.6	5.3	
FOUR MILE	828g 6900	4/28	10 33 0	1.6	20.8	20.8	
FREO BURR PASS	3450 8000	4/30 5/05	0	.0 .0 19.6	4.2	8.5 51.5	
FREIGHT CREEK FRIUAY HILL	6000 4620	5/01	14	6.5	28.4 15.9	15.9	
FROHNER MEADOWS FROHNER MEADOWS PILLOW GARVER COEFFE	6480 6480	4/29	6 SP	2.8 2.1 6.0	8.3	8.1	
GARVER CREEK GARVER CREEK PILLOW	4250 4250	4/27 4/27	7 5P	2.4 4.7	11.3	9.2 5.4 4.9	
GIBBONS PASS GOAT MOUNTAIN GOLD STONE	7100 7000	4/29		13.9	2.1 24.4 14.8	25.3	
GRASSHOPPER GRAVE CREEK	8100 7000	4/29	_	12.5	21.4	20.5	
GRAVE CRLEK PILLOW	4300 4300	4/27 4/27	16 SP	5.5 6.3	13.2	16.0	
TANA WATER SUPPLY OUTLOOK Page	2				1010	7	
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R	VEY DATA						
`	SHOW (Con't.)			THIS YEAD		PAST N	FCORD
	DAAINAGE BASIN MOIN SNON COURSE NAME	Elevation	Dele of Sun ej	Shall Depth (Prohill	• III + Cprimi (lock)	Marti Contr Latt VI or	
Ξ	GRIFFIN CREEK OIVIOE GUNSIGHT LAKE	5150 6300	5/01	0	• 0	0.3	8.
	HALVERSON CREEK (10)	4850 5030	5/01 4/27 4/28	64 72 12	30.4 38.8 4.1	43.5 36.5 15.4	45.1
	HAWKINS LAKE HAWKINS LAKE PILLOW	6450 6450	4/27	60 SP	28.4	24.3	7.7 36.0 33.7
	HEART LAKE TRAIL HEBGEN DAM	4800 6550	4/27 4/30	2B 0	11.4	21.3	19.1
	HELL ROARING O1VIDE HERRIG JUNCTION	5770 4850	4/29 4/29	42 30	18.8	31.1	33.5
	HOODOO BASIN	4530 6600	5/01 4/28	0 24	8.2	1.4 10.8	2.6 13.3
	HOOOOO BASIN PILLOW HOOOOO CREEK	6000 6000 5900	4/27 5/01	89 SP	44.0 35.7	49.6	55.6 52.8
	ICEBERG LAKE #3 INGEPENDENCE	5600 7850	4/27 4/30 4/28	81 41 33	39.8 18.5 12.5	49.3 29.9 17.2	52.0 35.1
	INTERGAARD ISLAND PARK (IO)	6450 6310	5/01	0	.0	9.0	20.5 9.5 11.4
	JACK CREEK JAHNKE LAKE TRAIL	7500 7200	4/28 4/30	0	• 0 4 • 4	13.9	9.7
	JOHNSON PARK JOSEPHINE LOWER #9	6450 4900	4/28	0 23	.0 8.0	6.7 14.5	2.8 19.1
	KEELER CREEK KINGS HILL KIT CARSON (10)	3300 7500	4/27 5/01	17	.0 6.4	.0 17.8	1.8 17.9
	KIWANIS CAMP LAKE CAMP (WY)	5020 3720 7850	4/27 4/28	0	• 0	2.6	. 6
	LAKE CREEK LAKEVIEW CANYON	6100 6930	5/01 4/25 4/28	0 7 24	.0 2.6 8.5	7.5 2.3	8.8 4.6
	LEMHI PASS	7400 7480	4/28 4/28	14	5.0	11.6 10.3 11.3	13.3 11.3 9.2
	LEMHI RIOGE LEMHI RIOGE PILLOW	8100 8100	4/28 4/28	14 SP	4.B 6.7	15.1	10.6
	LICK CREEK LICK CREEK PILLOW	6860 6860	4/28 4/28	24 SP	9.5 6.6	10.8 9.5	11.2
	LITILE PARK LOGAN CREEK LOLO PASS (10)	7400 4300 5230	4/30 4/28	32	13.2	15.4	19.0
	LONE MOUNTAIN LOOKOUT (ID)	8800 5250	4/30 4/30 4/30	3B 46 40	21.7	30.8 24.0	31.4 28.1
	LOST HORSE LOST SOUL	5940 4800	4/30	57 9	17.4 25.2 3.2	28.2 34.6 10.5	35.4 35.8
	LOWER TWIN LUBRECHT FLUME	7900 4200	4/28 5/03	39 0	17.3	25.2	9.2 25.8 .9
	LUBRECHT FLUME PILLOW LUBRECHT FDREST # 3	5450 5450	5/03 5/03	SP 0	•1	.0 3.3	.6 4.2
	LUBRECHT FOREST # 4 LUBRECHT FOREST # 6	4650 4040	5/03 5/05	0	• 0	• 0	.3
, 4	LUBRECHT HYOROPLOT LUPINE CREEK (WY) MAGISON PLATEAU	4200 7300	5/03 4/30	11	.0 3.6	• 0	8.9
· 5	MADISON PLATEAU PILLOW MANY GLACIER	7750 7750 4960	4/29 4/29 4/30	40 SP I4	19.0	23.8 25.6	23.5 24.9
	MANY GLACIER PILLOW MARIAS PASS	4960 5250	4/30 4/30	SP 21	5.6 .2 7.6	15.8 11.5 18.2	-
	MAYNARD CREEK MATNARD CREEK PILLOW	6210 6210	5/01 5/01	23 SP	8.2	23.5	17.8 16.5 13.8
	MIDDLE MILL CREEK MILL CREEK	785 ₀ 75 ₀₀	4/30 5/05	22 0	8.2 .0	18.7 12.2	19.2 15.3
	MINERAL CREEK MONUMENT PEAK MONUMENT PEAK PILLOW	4000 8800	4/30	19 59	6.4 22.6	9.9 27.9	14.2 32.7
	MOOSE CREEK (10) MOULTON RESERVOIR	6800 6800 6850	4/28	SP 16	20.6 4.2	22.8	16.6
	MOUNT ALLEN # 7 MOUNT LOCKHART	5700 6400	4/28 4/29 4/29	0 72 38	.0 31.1 14.4	7.6 39.6	49.6
	MOUNT LOCKHART PILLOW MUOD LAKE	6400 7650	4/29 5/01	SP 26	18.0 10.9	27.0 25.2 21.0	23.3 22.6 22.5
	NEWTON MOUNTAIN NEZ PERCE CAMP	5600 5580	4/30 4/27	59 15	28.0	27.8 17.0	13.6
	NEZ PERCE CAMP PILLOW NEZ PERCE CREEK NEZ PERCE PASS	5580 6500	4/27 4/28	SP 0	7.9	16.8	5.3
	NOISY BASIN NOISY BASIN PILLOW	6570 6040	4/27	13 90	4.8 42.4	18.5 48.3	17.4 52.1
	NORRIS BASIN (WY) NORTH FK. ELK CREEK	6040 7500 6250	4/26	SP 0	36.8	43.1 7.9	45.5 8.6
	NORTH FK. ELK CREEK PILL NORTH FORK JOCKO	6250 6330	5/03 5/03 5/01	8 SP 63	3.1	13.4	11.5 11.8
	NORTH MEADOW NORTHEAST ENTRANCE	7500 7400	4/28 5/03	16	27.4 5.4 .5	45.9 11.8 8.0	49.1 11.4 8.5
	NORTHEAST ENTRANCE PILL.	7400 8500	5/03 4/25	SP	18.7	8.9 17.8	8.2
	OLD FAITHFUL(WY) OPHIR PARK PALISAGE CREEK	7360 7150	5/05 5/01	0 25	.0 9.6	10.9 23.7	21.3
	PETERSON MEADOWS PETERSON MEADOWS PILLOW	8250 7200	5/01	51 16	23.8 5.6	32.8 11.8	35.8 12.2
	PICKEI PIN O PICKFOOT CREEK	7200 9450 6650	4/29 5/01	\$P 63	6.4 26.0A	11.8 26.5	13.0 32.4
	PICKFOOT CREEK PILLOW PICNIC GROUNDS	6650 6200	4/28 4/28 4/29	0 SP 0	1.2	10.2	-
	PIEGAN PASS # 6 PIPESTONE PASS	5500 7200	4/29 5/01	58 10	25.2 1.9	3.8 34.4 9.8	
	PLACER BASIN F FOORMAN CREEK	8800 5100	5/01 4/27	33 46	13.0A 19.6	21.5	6.5 27.1 33.6
	PORMAN CREEK PILLOW PORCUPINE	5100 6500	4/27 4/29	SP 7	17.5	37.0 11.3	32.1
	PORCUPINE PILLOW POTOMAGETON PARK PTARMIGAN #8	6500 7150	4/29	SP 0	• 1 • 0	8.4	12.2
	RED MOUNTAIN RED TOP	5800 6000	4/30 5/02	58 26	26.3	33.2 14.0	42.2 20.5
	ROCK CREEK ROCKER PEAK	5260 5600 800 0	4/30 4/25 5/05	10	9.6 4.4	21.3	9.1
	ROCKER PEAK PILLOW	8000 4700	5/05 5/05 4/28	22 SP 0	9.6 13.7	18.8	18.3
	ROCKY BOY PILLOW SACAJAWEA	4700 6550	4/28 5/01	SP 12	.0 4.0	7.4 7.6	2.6
	SAODLE MOUNTAIN SAODLE MOUNTAIN PILLOW	7940 7940	4/29	39 SP	17.7 16.9	17.0 29.5 24.8	15.8 30.0 30.7
	SAWTELL MOUNTAIN (IU) SHOWER FALLS	8710 6100	4/28	70 52	33.5	35.4 30.3	37.1 32.2
	SHOWER FALLS PILLOW SILVER RUN	8100 6630	4/29 4/29	SP 0	21.5	28.1	31.9 4.9
	SILVER RUN PILLOW	6 630	4/29	SP	• 0	.0 (Contin	-
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SNOW (Con't.)			THIS YEAR		PAST REC	
DRAIN OCE BASIN widner SHOW COURSE		Oers	Sne=Owen e	Free Contest	Perr Content	
NAME	Elevanion	et Survey	Illiches)	(lechar)	Lost Year	Avert
SKALKAHO SUMMIT	7260	4/27	47	20.0	29.2	29.3
SKALKAHO SUMMIT PILLOW	7260	4/27	SP	20.0	27.1	- 2
SLAG-A-MELT LAKE	8750 -	4/28	46	19.0	28.5	30.2
SL10E ROCK MOUNTAIN	7100	4/29	25	9.2	20.1	20.9
SMUGGLER MINE	6960	4/30	0	.0	11.0	10.3
SOUTH FORK SHIELDS	8100	4/29	49	21.2	33.6	30.2
SOUTH FORK SHIELDS PILLO	8100	4/29	SP	15.7	-	-
SPOTTED BEAR MOUNTAIN	7000	5/01	4	1.4	12.4	11.7
SPUR PARK	8000	5/0I	30	11.5	27.0	26.0
SPUR PARK PILLOW	8100	5/01	SP	14.0	26.0	25.6
STAHL PEAK	6050	4/27	3P B2	3B.4	36.9	46.0
STAHL PEAK STAHL PEAK PILLOW	6050	4/27 4/2 7	SP	31.3	- 30.7	36.1
- ·	9650	5/01	3P 79	33.0д		51.1
STAR LAKE E	-		17	53.UA	8.2	12.9
STEAMBOAT POINT (WY)	7500 6600	5/02			15.9	12.0
STEMPLE PASS	6600 7780	4/27	19 24	6.2 8.8	15.9	17.5
STORM LAKE	7780	4/29	24	8.8		-
STRYKER BASIN	6180 6500	4/29	53 n	23.5	31.9	5.9
STUART MILL	6500	5/01	0 43	20.0	4.3 33.4	36.1
STUART MOUNTAIN	7400	5/01	43	20.0	33.4	
SUCKER CREEK	3960	4/28	0	• 0	16.4	10.0
SUGARLOAF	7350	5/06	1	2.2	16.4	10.0
SYLVAN PASS (WT)	7100	5/01	5	2.2	5.4 12.7	
TARGHEE PASS (10)	7000	4/28	0	• 0	12.7	16.2
TAYLOR ROAD	4080	4/28	0	.0	• 0	1.3
TEN MILE LOWER	6600	4/28	9	3.2	9.7	7.1
TEN MILE MIODLE	6800	4/28	25	9.0	15.8	14.1
TEN MILE UPPER	8000	4/28	24	10.0	18.9	17.1
TEPEE CREEK	8000	4/25	35	11.4	17.0	18.6
TEPEE CREEK PILLOW	8000	4/25	SP	10.4	14.7	14.9
TIMBERLINE CREEK	8850	4/30	41	15.6	13.9	21.3
TRAIL CREEK	7090	4/28	_	3.4	12.0	7.6
TRINKUS LAKE	6100	5/01	63	30.2	43.6	47.6
TV MOUNTAIN	6800	5/01		8.9	22.6	21.7
TWELVEMILE CREEK	5600	4/30	_	8.7	15.5	17.4
TWELVEMILE CREEK PILLOW	5600	4/30		8.0	6.2	15.6
	7150	4/29		5.6	16.B	
TWENTY+ONE MILE TWIN CREEKS	7150 3580	5/01		.0		2.7
TWIN CREEKS	6510	4/30		36.2		
TWIN LAKES	6900			32.7		
TWIN LAKES PILLOW	_	4/30 5/01		32.7		
UPPER HOLLANO LAKE	6200 6500	5/01				- 4 5
VALLEY VIEW (ID)	6500 5600	4/28		.0 -0		
WALDRON	5600	4/28		.0		
WALDRON PILLOW	5600	4/28	_	3.7		
WARM SPRINGS	8250	5/05		12.5		
WEASEL DIVICE	5450	4/27	_	26.7		
WEST YELLOWSTONE	6700	4/29	7	2.4		
WEST YELLOWSTONE PILEON	6700	4/29	SP.	2.0	5.0	
WHISKEY CREEK	6800	4/29	5.5	10.0		
WHISKEY CREEK PILLOW	6800	4/29	SP SP	11.2	18.9	16.7
WHITE ELEPHANT (IO)	7700		38	15.7	22.8	25.2
WHITE MILL	8700		53	23.0	30.8	31.9
WHITE MILL PILLOW	8700			19.9	28.5	5 28.1
	8850				6.8	7 • 0
WHITE PINE RIGGE	7650		_		14.8	8 12.3
WOLVERINE (WT)	7650 5700				4 17.4	4 11.4
WRONG CREEK	5700 6800				_	-
WRONG RIOGE	2000	7/20	38		,	
LATE ARRIVING DATA:						
				00	22	22.0
GR12ZLY PEAK	8400	4/29	9 51	20.4	23.8	23.8

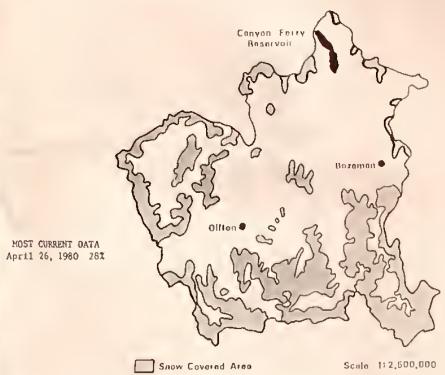
Average based on 1963-77 period, A - Aerial observation; water content estimated, SP - Snow Pillaw observation; water content only. *Estimated from SNOTEL.

	Thousand Acre Feet) END OF MONTH	414482	U	vitte Storige	
Bilmi & Slivani	#ESERYDIA	Capecity	Tour Year	Fell Arm	A+11.04.0
	COLUMBIA				
Kootenai	Koocanusa	5,694.0	2,539.0	2.368.0	
Flathead	Hungry Horse	3,428.0	2.428.0	2.285.0	1,896.
120411-0-	Flathead Lake	1,791.0	953.2	738.5	915.
	Camas (4)	45.2	22.1	27.0	28.
	Mission Valley (8)	100.3	56.4	68.7	47.
Clark Fork	Georgetown Lake	31.0	24.3	26.0	23.
•	Lower Willow Creek	4.9	3.2	2.0	10.
	Nevada Creek	12.6	9.7	10.3	141.
	Noxon Rapids	334.6	289.6	278.1	21.
Bitterroot	Painted Rocks	31.7		14.4	17.
	Como	34.9			17.
	M1SSOUR1				
Beoverhead	Lima	84.0	32.9	51.0	57.
2701421124	Clark Canyon	257.2	170.4	180.3	152.
Ruby	Ruby	38.8	33.7	33.0	35.
Madison	 Hebgen Lake 	377.5	266.5	183.3	239.
	Ennis Lake	41.0	39.3	37.2	35.
Gallatin	Middle Creek	8.0	4.3	3.7	1 504
Missouri	Canyon Ferry	2,043.0	1,592.0	1,473.0	1,504.
1120000	Hauser & Helena	61.9	62.5	13.2	61. 10.
	Lake Helena	10.4	10.6 15.1	.7 79.5	72.
	Holter Lake	81.9	_	18,170.0	15,700.
	Fort Peck Lake	18,910.0	15,830.0 9.7	10.5	9.
Smith	Smith River	10.6	8.8	9.3	
	Newlan Creek	12.4	7.0	6.7	6.
Muaselahell	Bair	23.1	18.8	11.8	12.
	Martinsdale	72.2	10.0	60.0	56.
	Deadman's Basin	99.0	64.7	60.6	48
Sun	G1bson	32.2	25.0	28.2	24
	Willow Creek	32.2	30.8	25.7	24
	Pishkun	11.9			9
Marias	Lower Two Medicine	19.2			. 12
	Four Horns	30.0	22.1	21.9	17
	Swift	111.9	72.2	98.7	77
	Lake Frances	1,347.0	545.5	545.5	563
Milk	Elwell (Tiber)	3.5	2.9	2.2	2
	Beaver Creek	127.2	107.1	129.5	104
	Fresno	66.8	48.7	46.7	46
	Nelson	00.0	1011		
	HUDSON	BAY 66.2	15.4	20.8	22
St. Mary's	Lake Sherburne	00.2	2314		
	YELLOWS	TONE	1.6	2.7	2
Stillwater	Mystic Lake	21.0	1.0	18.0	19
Clark's Fork	Cooney	27.4	34.6	31.7	42
Tongue	Tongue River	68.0 1.356.0	779.1	924.8	585
Highorn	Bighorn Lake	1.350.0	77711		

Average based on 1963-77 period.

FLOWS CHARPOINTHEAN CALLY) (As, the 16 24 Mr. on 487 of greatest for	PEAK FLOW (SECOND FEET)					
POPECASI PORT	Foreskit Range	Approp				
IMpr						
UMBIA RIVER DRAINAGE						
Blackfoot River near Bonner	4,500 - 6,000	9,902				
Clark Fork River above Missoula	9,000 - 11,000	16,531				
Bitterroot River near Darby	3,500 - 4,500	6,650				
Clark Fork River below Missoula	16,000 - 20,000	32,373				
Clark Fork River at St. Regla	25,000 - 30,000	41,080				
N. Fk. Flathead near Columbia Falls	13,000 - 15,000	23,167				
8. Fk. Flathead near West Glacier	14,000 - 16,000	25,020				
	14,000 - 10,000	23,020				
SSOUR1 RIVER DRAINAGE						
- CANALITY DISTANCE						
Blg Hole River near Helrose	4,400 - 5,500	8,009				
Gallatin River near Cateway	4,000 - 4,800	5,369				
Gallatin River near Logan	3,500 - 5,000	5,324				
Hissouri River at Toston	10,000 - 12,000	18,005				
Belt Creek near Monarch	600 - 1,400	1.742				
Marias River near Shelby	3,000 5,000	12,720				
S. Fk. Musselshell above Martinedale	300 - 400	745				
	300					
ELLOWSTONE RIVER DRAINAGE						
Yellowstone River at Livingston	15,500 - 17,500	20,566				
Boulder River near Big Timber	3,700 - 4,300	5.10				
Stillwater River near Abserokee	4,700 - 6,000	6,26				
Clarks Fork River near Belfry	5,500 - 6,500	7,34				
Rock Creek near Red Lodge	800 - 1,000	1.06				
Yellowstone River at Billings	32,000 - 38,000	39,18				

SATELLITE SNOW COVER



DATA PROVIDED BY NOAA/NESS

%1963-77 AVERAGE

MISSOURT RIVER BASIN
Abova
Cenyen Ferry Dam

		AVERAGE
		SHOWLIKE
	' PERCENT	ELEVATIO
	SHOW COVER	THE FEET
DATE	45	6830
Neworher 6, 1979	45	6830
November 12, 1979	84	5120
Havenher 20, 1979	89	4830
November 29, 1979	80	5340
December 11, 1979	602	6250
nadember 18, 1979	86	4890
Becember 23, 1977	72	5720
necember 30, 1979	100	3800
Inculary 6, 1900		5820
January 16, 1980	70E	4300
January 19, 1980	96	4530
January 28, 1980	93	4570
February 8, 1980	92.5	3800
February 16, 1980	100	5290
February 25, 1980	81	4760
March 1, 1980	90	5590
March 20, 1980	75	5720
Market Co.	72	5590
March 22, 1980	75	5230
MARCH 421	82	5490
Anfil Ti	. 77	5975
1045 14-1	67.5	6490
Angli +74	54	7500
April 20, 1980 April 26, 1980	28	7300
Apr		

Columbia River Drainage

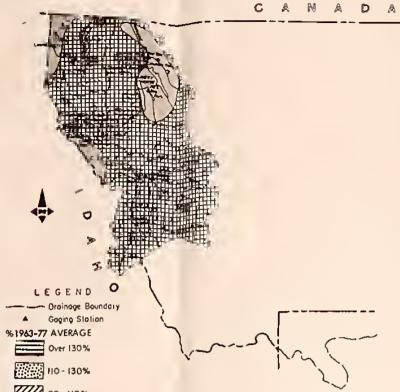
MOUNTAIN SNOWPACK

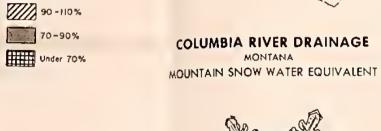
It appears that snowmelt is two to three weeks early this year. Melt occurred at all elevations during April and snow is gone from most low elevation areas.

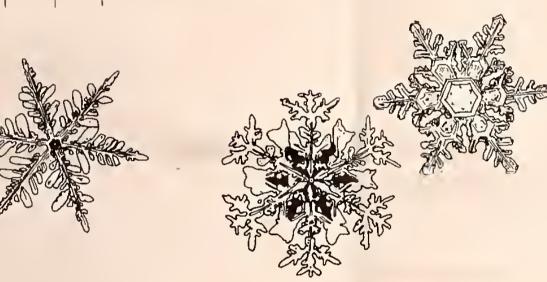
With the exception of three small areas in the Flathead, Kootenai, and Lower Clark Fork drainages, the snowpack is less than 70 percent of avorage for May 1. Above normal temperatures and lack of snowfall have caused snow water content to be lower than April 1 at all but four snow courses. Normally about half of the snow courses show increases during

WATER SUPPLY OUTLOOK COMPANIED FOR PAIR ASSESSED BARRETS

	Fise Farted					
ABRA to MASATE	Spring Season	Lass Seaton				
Tobacco	fair	poor				
Little Bitterroot	fair	poor				
Mission Valley	fair	poor				
Flint Creek	fair	poor				
Upper Clark Fork	fair	poor				
Nevada Creek	fair	poor				
Blackfoot	fair	poor				
Weat-side Bitterroot.	fair	poor				
Esat-side Bitterroot.	fair.	poor				
Bitterroot River	· fair	poor				
Lower CInrk Fork	fair	poor				
DOWCE CENTR TOLK TITLE		-				







CVE STO

		THIS TEAR		PAST HEEDAD		THIS TEAR		Y PAST RECORD		THIS YEAR		PASE F	RECORD	
		FORE	CAST	THOUSAND	121	FFEET	FOR	ECAST	THOUSAND	AERE FEET	POR!	ECAST	THOUSAND A	CHE FEET
BASIN, STREAM IN4/or FORECAST POINT		Aris Fasa	Paysent of Assungt	Continu		Astrage	Encupand Apre Epps	Pricent of Average	toron	Анпр	Thousand Asia Feri	Perent of Aurit	COSTERNI	A + 2 12 T2
	PERIOD		MAY -	SEPTEMBE	R			MAY	- JULY			MAY.	- JUNE	
KOOTENAI RIVER below Libby Oam		5,740	84	4,191		6,814	4,810	84	3,584	5,746		1414	JUNE	
FISHER RIVER mear Libby		113	57	74.71		199	105	57	3,304					
YAAK RIVER near Troy		225	59			434	238	58		183				
KOOTENAI RIVER at Leonia (1)		6,590	81	5,111	,	8,116	5,590	80	4 (12	411		0.0		
INFLOW MOULTON RESERVOIR or BUTTE (Million Gallons		0,370	01	3,111	,	0,110			4,413	6,966	4,300	80	3,619	5,402
WARM SPRINGS CREEK AT MEYERS DAN near Anaconda (2)	,	20.0	60	20.0		10.1	110	44	217	248	96.0	43	208	222
FLINT CREEK near Southern Cross (3)	• • • • • •	29.8	62	29.0		48.1	23.8	62	21.9	38.6				
FLINT CREEK helen Roulder Creek (4)		8.5	52			16.4	6.8	51		13.4				
FLINT CREEK below Boulder Creek (4)		41.0	58			70.1	29.0	54		53.5				
INFLOW LOWER WILLOW CREEK RESERVOIR near Hall (5)	• • • • •	7.0	49	9.3		14.3	6.3	47	8.6	13.5				
MIDDLE FORK ROCK CREEK near Philipsburg		51.0	68			74.9	45.5	6B		67.1				
NEVADA CREEK near Finn		8.3	43			19.3	7.3	42		17.5				
BLACKFOOT CREEK near Bonner		550	61			899	480	60		802	405	60		676
CLARK FORK RIVER above Milltown (6)	• • • • •	460	63			734	385	62		621	310	61		505
CLARK FORK RIVER above Misaoula		1,010	62	1,256]	1,633	865	61	1,106	1,423	715	61	975	1,180
WEST FORK BITTERROOT RIVER near Conner (7)		90.0	53			170	82.0	53		155				
BITTERROOT RIVER near Darby		312	57	377		549	285	57	341	499	245	57	302	427
SKALKAHO CREEK near Hamilton		37.0	68			54.5	32.0	68		47.0				
BURNT FORK CREEK near Stevensville		25.0	68	25.3		36.8	21.5	68	20.0	31.7				
BITTERROOT RIVER at Missoula (9)		840	60		1	1,409	775	60		1,282	650	60		1,075
CLARK FORK RIVER below Missouls		1,850	61		3	3,042	1,640	61		2,705	1,365	61		2,255
CLARK FORK RIVER at St. Regis		2,280	57	3,184	4	4,001	2,000	56	2,873	3,557	1,660	56	2.547	2,971
NORTH FORK FLATHEAD RIVER near Columbia Falls		1,240	69			1,809	1,120	69	-,0.0	1,622	930	70	~, ~, .	1,338
MIDDLE FORK FLATHEAD RIVER near West Glacier		1,210	69	1,589	1	1,756	1,100	69	1,471	1.595	920	70	1,285	1,315
SOUTH FORK FLATHEAD RIVER near Columbia Falls		1,400	67	1.844		2,076	1,300	67	1,758	1,934	1,130	68	1,600	1,659
FLATHEAD RIVER at Columbia Falla (10)		3,900	68	4.845	5	5,773	3,620	69	4,522	5,270	3,080	70	4,034	4,405
SWAN KIVER HEAR BIR FORK		410	69			595	355	70	-,,,,,,,	510	3,000	70	4,034	7,405
FLATHEAU RIVER Hear Polaon (11)		4,480	67	5,630	6	6,692	4.050	66	5,246	6,105	3,350	66	4,632	5,079
CLARK FORK KIVER near Plains (11)		6.950	63	9,161		570	6,180	62	8,453	9,953	5,100	62	7,495	8,238
Inomeson Kivek near Thompson Falls		150	68			219	126	66	04400	191	2,100	02	7,433	0,430
TRUSTECT CREEK AC INOMPSON FALLS		79.0	68			116	70.0	66		106				
CLARK FORK RIVER at Whitehorse Rapids		7.590	62		12	2,207	6,740	62		10,945	5,600	62		9,059
					-	,_0,	01/40	02		10,943	2,000	62		2,033

- I. Adjusted for storage in Lake Koocenuse.
- 2. Adjusted for storage in Silver Lake, diversions to and pumping from Georgetown Lake.
- 3. Adjusted for storage in Georgetown Lake, diversions
- from and pumping to Silver Lake. 4 Sum Filmt Crask at Mssville and Boulder Croak at
- Manyllla 5 Sum of North Fork Lower Willow Creak near Half and
- South Fork Lower Willow Creak near Hell,
- 8 Oilleionce in observed flow Clark Fork above Missoule and Blackfoot near Bonner,
- 7 Adjusted for storage in Painlod Rocks Reservoir.
- & Adjusted for diversion into Sunsot Highline Conet.
- 9. Dilleranco in observed flow Clark fork above and below Missoula.
- 10 Adjusted for storage in Hungry Horso Resorvorr, 11. Adjusted to: storage in Hungry Horse Reservoil and
- Flothood Loke.
- 12. Adjusted for storson in Hungry Horse Resolvers Flathasd Lake and Novon Ropids Reservoir



STREAMFLOW FORECASTS

Streamflows have increased because of early snowmelt. April runoff was near or above average on most streams. Runoff for the remainder of the sea-son is expected to be between 55 and 65 percent of average in the Clark Fork drainage and 65 to 70 percent of average in the Flathead drainage. The Kootenai River is forecast to have runoff around 80 to 85 percent of average on the main river, with tributaries in Montana forecast much

With the early runoff, it is expected that irrigation water will be in short supply in most drainages by midsummer. Many streams with low elevation headwaters have already reached their snowmelt peaks. The Clark Fork, Blackfoot and Flathead Rivers should peak before May IS, while the Bitterroot River should be four or five days later. All peak flows are expected to be lower than average on unregulated streams and rivers.

SUMMARY of SHOW MEASUREMENTS

AIVER BASIN	Number at	THIS TEAR'S SHOW			
SUB-WATERS-ED	Aver 144	Loor Year	Armaga		
Kootenai/BC	24	00	76		
Kootenai/Montana.		98	76		
	20	80	66		
Kootenai	44	87	70		
Little Bitterroot	5	9	12		
Flathead	34	67	64		
Clark Fork above					
Blackfoot	29	40	44		
Blackfoot	17	40	43		
Clark Fork above					
Missoula	46	40	44		
Bitterroot	14	62	60		
Lower Clark Fork		"-	00		
below Missoula	14	66	61		
Clark Fork (Total		1 00 1	01		
w/o Flathead)	74	52			
Pend O'Reille	/ "	32	53		
(Clark Fork &		- 1			
	100	1			
Flathead)	108	57	57		
Columbia (Pend	1				
O'Reille &					
Kootenai)	138	65	61		

average monthly weather outlook 12,207 6,740 62 10,945 5,600 62

Yellowstone River Drainage

LEGEND

	THIS	YEAR	THOUSAND AS		THIS	TEAR	IPAST H	OROSII
BASIN STREAM AND AN PORECAST POINT	II OH	ECASE		-	FORT	CFST	THOUSAND A	CAL LELL
		Paramilio* Average	5, 101 30 20	p or als	Thheart # Asta Fape	Pananagt Antiqu	Cortholic	Azespe
PERIOC PERIOC		MAY - S	SEPTEMBER			MAY	- JULY	
YELLOWSTONE RIVER at Corwin Springs YELLOWSTONE RIVER near Livingston	1,430	71	1,734	2,021	1,190	71	1,480	1,668
	1,690 285	72 70		404	1,380	71 70		1,941
CLARKS FORK RIVER pear Belfry	495	78		634	420	80		370 528
	470 88.0	75 76	103	623 116	420 68.0	77 78	70.0	543
YELLOWSTONE RIVER at Billings	49.0	88	3,882	\$6.0	39.0	89	79.0	89.0 44.0
	3,016 1,468	68 78	986	1,887	2,540	68	3,346	3,725
YELLOWSTONE RIVER at Miles City (A)	109	65		168	96.0	65	834	1,714 147
YELLOWSTONE RIVER near Sidney (5)	4,557 4,960	69 69		6,636 7,214	3,960 4,150	69 67		5,737 6,212
1 Adjusted for storage to security and a			-					01212



- djustod for storago in Mystic Lake
- 2 Adjusted for storage in Cooney Reservoir.
- 3. Adjusted for erorago in Sulfato Bill, Boysen, Bull.
- Lako, Pilot Butte & Bighorn Reservoirs. 4. Adjusted for stologe in Buffalo Bitt, Boyson, Bull. Laka, Pilot Butta, Bighorn & Tongua Rivor
- Resolvoirs 5. Adjusted for reservoirs in 4, and diversions into the Lower Yollowstone Canel.

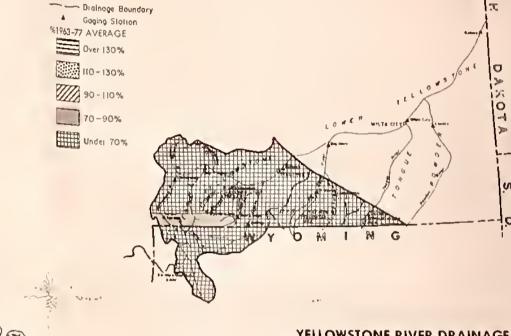
STREAMFLOW FORECASTS

April streamflow was near or above average on most drainages. May through September runoff is forecast to be between 70 and 80 percent of average. This year runoff is expected to occur around mid-May on most high elevation tributaries. Some lower streams have already reached their snowmelt peak.

Irrigation water supply shortages will be common by mid to late June on many of the smaller tributaries because of the early runoff and low snowpack.

WATER SUPPLY OUTLOOK SHIPM TO BE TO HELD A SUPPLY OUTLOOK

	P th as P	evized.
STREAM or AREA	Spring Seavon	Lasa Season
		'
Yellowstone at		
Livingston	fair	fair
Shields	fair	fair
Boulder	fair	fair
Sweetgrass - Big		
Timber	fair	fair
Stillwater	fair	fair
Rock Creek	fair	fair
Clark's Fork	fair	fair
Yellowstone above		
Bighorn	fair	fair
Bighorn	avg	avg
Little Bighorn	fair	poor
Tongue	fair	fair
Powder	fair	fair
Lower Yellowstone	fair	fair



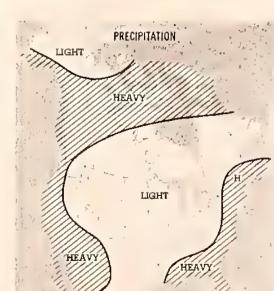
YELLOWSTONE RIVER DRAINAGE

MONTANA MOUNTAIN SNOW WATER EQUIVALENT

MOUNTAIN SNOWPACK

The area snowpack varies from about 50 to 75 percent of average. Some lower elevation snow courses have already meited out. Only one snow course showed an increase la water content over April 1 measurements. Normally about half of the snow courses show increases in water content during April.

Snow is melting at most elevations and some data sites are reporting as much as one lach of water content moltling each day.



The National Weather Service expects temperatures to be above normal for May for all of Montana and the Northwestern United States. Precipitation is projected to be light in

MAY 1980



SUMMARY OF SNOW MEASUREMENTS

RIVER BASH and/or SUBBATCRSHED	Humber of Courses	BALER AS PERCENT OF			
	Averaged	LINTER	Vinele 4		
Upper Yellowstone					
ab Livingston	11	60	53		
Shielde	6	45	49		
Boulder 6					
Stillwater	6	72	64		
Rock Creek &		'			
Clark's Fork	11	7.5	67		
Yellowatone (ab					
Bighorn River)	34	64	59		
Bighorn/Wyoming	31	80	62		
Little Bighorn	4	61	39		
Bighorn (Total)	35	78	59		
Tongue	5	70	46		
Powder	5	57	40		
Yellowatone					
(Total)	79	69	58		

Missouri River & Hudson Bay Drainages

		TEAR	PAS	ORCORC	THIS	YEAR	PA	T RECORD
		ECAST	THOUSE	DACRE FEFT	k Out	FCAST	THOUSAN	O ACRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand	Percent of . Average	Lauten	A-17-3E*	Thousand Acre Feet	Percent of Average	Carlaga	Wierafia
PCRIOD		MAY -	SEPTEMBE	R		MAY	JULY	
RED ROCK RIVER near Monida (1)	57.0	64		88.5	52.0	64		80.8
BEAVERHEAD RIVER near Crant (2)	77.0	58	57.0	133	64.0	58	48.0	110
BEAVERHEAD RIVER at Barratte (2)	107	59		180	87.0	58		150
RUBY RIVER near Alder	75.0	78		96.0	62.0	78		80.0
BIG HOLE RIVER near Melrose	375	53		710	334	52		648
BOULDER RIVER near Boulder	59.0	63	81.9	93,3	55.0	63	77.4	87.1
WILLOW CREEK near Harrison	11.5	61		19.0	10.0	60		16.6
MADISON RIVER near Grayling (3)	349	75	334	466	256	73	248	353
MADISON RIVER near McAllister (4)	615	79	552	783	458	77	423	598
GALLATIN RIVER near Gateway	385	71		542	325	71		458
INFLOW MIDDLE CREEK RESERVOIR near Bozeman (5)	23.3	81	24.1	28.7	20.0	81	21.1	24.6
HYALITE CREEK near Bozeman (6)	34.6	77		44.9	29.5	77		38.5
CALLATIN RIVER at Logan	360	62		580	298	61		487
MISSOURI RIVER at Toston (7)	1,375	59	1,610	2,314	1.125	57	1,348	1,972
SHEEP CREEK near White Sulphur Springs	12.1	57	21.5	21.3	10.0	55	18.3	18.3
SUN RIVER at Cibaon Dam (8)	348	64	449	546	310	62	406	497
BELT CREEK near Monarch	67.0	49		137	60.0	48	400	125
MISSOURI RIVER at Fort Benton (9)	1,958	54		3,613	1,580	51		3,104
TWO MEDICINE CREEK near Browning (10)	162	69		235	152	69		221
BADGER CREEK near Browning	78.0	63		124	66.0	62		107
MARIAS RIVER near Shelby	335	65	390	518	305	64	365	474
MISSOURI RIVER at Virgelle (11)	2,297	55		£ 100	1,890	52	505	3.634
SOUTH FORK JUDITH RIVER near Utica	Streamga	ge diac	ontinued	by USCS.	1,000	32		12.4
MISSOURI RIVER near Landusky (11)	2,529	56			2.080	53		3,925
NORTH FORK MUSSELSHELL RIVER near Delpine	2.0	3B		5.3	1.6	36		4.4
SOUTH FORK MUSSELSHELL RIVER above Martinedale	22.0	40		55.2	20.7	40		51.3
	2,369	56			2,025	55		3,705
MILK RIVER at Eastern Crossing	182	83		220	-,0-5	,,,		3,703
	7,330	63	1		6,460	62		10,425
CACCAMANIMICAL DIVIDE BACTU								
SASKATCHEWAN RIVER BASIN								
SWIFT CURRENT CREEK at Sherburne (12)	87.0	70	99.1		76 /	7.0	00.5	100
ST. MARY'S RIVER near Babb (12)	337	71	39.1	124	75.6	70	89.2	108
St. FMAI S ATVER Hear back (12)	337	, .		478	285	70		407

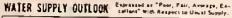
- 1. Adjusted for storage in Lims Reservoir.
- 2 Adjusted for Storage in Lime & Clark Canyon arigy reas R
- 3. Adjusted for storage in Hebgen Lake. 4. Adjusted for storage in Hebgen Lake & Ennis Lake.
- 6. Sum West Fork Hyallte Creek & Emil Fork Hyelila Creek shove the reservoir,
- 6. Adjusted for storage in Middle Creek Reservoir. 7. Adjusted for storage in Lims, Hebgen, Ennis,
- & Clark Conyon Reservoirs. B. Adjusted for storage in Gibson Reservoir &
- diversions. 9. Adjusted for atorage in Lima Clark Canyon.
- Hebgen, Ennis, Gibson, Pishkun, Willow Creek, & Canyon Farry.
- 10. Adjusted for storage in Two Medicine Reservoir & diversions in Two Medicine Canal,
- 11. Adjusted for all upstream reservoirs 12. Adjusted for storage in Lake Sharburns

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

STREAMFLOW FORECASTS

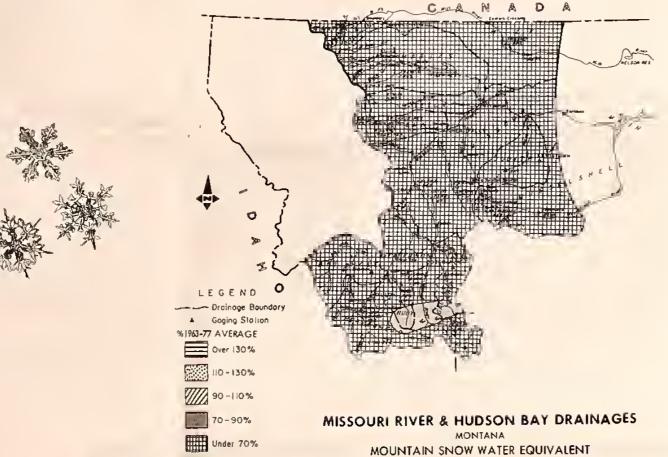
Runoff during April was generally near to above average. Streamflow for the remaining spring and summer months is forecast to be around 50 to 65 percent of average on most drainages. The Ruby, Upper Gallatin, St. Mary's and Milk Rivers are expected to produce a little higher runoff, but will still be in the 70 to 80 percent range. All snowmelt peak flows are expected to be below average and two to four weeks earlier than usual. Many lower elevation stroams have reached or are now reaching their snowmelt peaks. The Madison, Jefforson, Big Hole Rivers and Missouri River inflow to Canyon Ferry Reservoir are expected to reach their peak snowmelt runoff around May 10. The Gallatin River should peak about a week later.

With the shortage of snow this season and early warm weathor, irrigation water shortages are expected to be common in most areas by mid to late June.



	Flow Parted				
STREAM W AREA	Spring Season	L éte Senson			
Bourowhood					
Beaverhead	fair	poor			
Ruby	fair	poor			
Big Hole	fair	poor			
Boulder	fair	poor			
Jefferson	fair	poor			
Madison	fair	poor			
Callatin	fair	poor			
West-Side Missouri	fair	poor			
Smith-Belt	fair	poor			
Sun	fair	POOT			
Teton	fair	poor			
Morias	fair				
Judith	fair	poor			
Musselshell	_	poor			
Milk	fair	poor			
	fair	fair			
Bear Pawe	fair	fair			
St. Mary's	fair	poor			





MOUNTAIN SNOWPACK

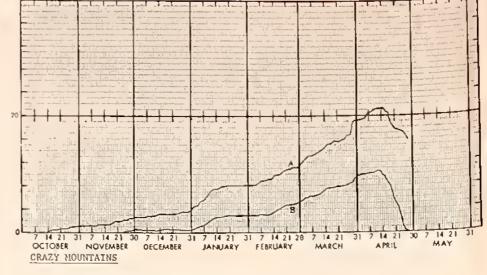
Presently, water stored in the snowpack varies from about 40 to 70 percent of average. Many low elevation snow courses have no snow. The melt rate at many snow courses is near or exceeds one inch of water content per day,

Except for three high elevation snow courses in the Madlson-Gallatin drainage, water contents measured on May 1 were lower than on April 1. Half of the snow courses would normally show increases. Above normal temeratures persisting through much of April have caused melting at all elevations. Snow cover is gone from most low elevations and exposed south ficing slopes.

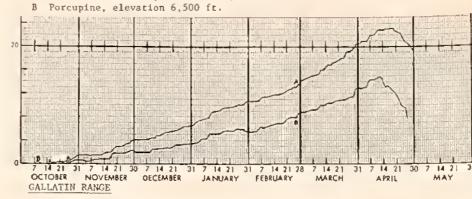
SUMMARY OF SHOW MEASUREMENTS

				l
Beaverhead	18	60	61	l
Ruby	8	68	62	l
Big Hole	20	52	53	ı
Boulder	9	38	45	l
lefferson	55	55	56	ł
fad180m	19	59	55	
Gallatin	15	66	60	
fissouri Headwater	89	58	57	
lest-Side Missouri				
(Toston-Cascade)	7	42	50	
Smith & Belt	6	42	44	
lissouri Main-stem	13	42	47	
Ceton & Sun	8	38	46	
Marias	4	64	61	
Marias-Teton-Sun	12	50	54	
udith	6	41	42	
wsselshell	5	44	52	
udith-Musselshell	11	42	46	
111k	1	15	23	
ear Paws	6	0	0	
dissouri (Total)	132	54	54	
askatchewan				
t. Mary's	7	68	56	
ow River in				
Alberta	-	-		
	1			

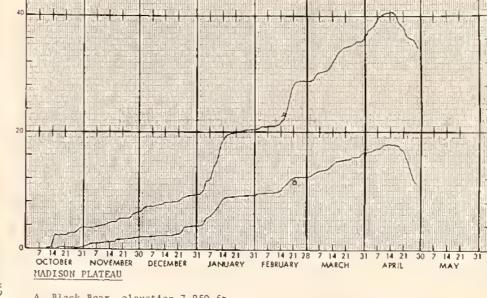
SNOW PILLOW DATA



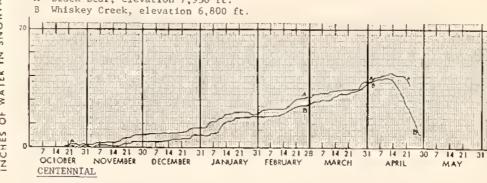
A South Fork Shields, elevation 8,100 ft.



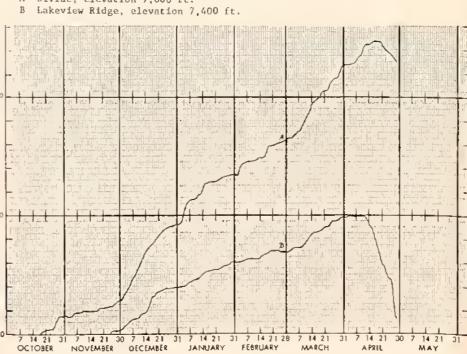
A Shower Falls, elevation 8,100 ft. B Lick Creek, elevation 6,860 ft.



A Black Bear, elevation 7,950 ft.



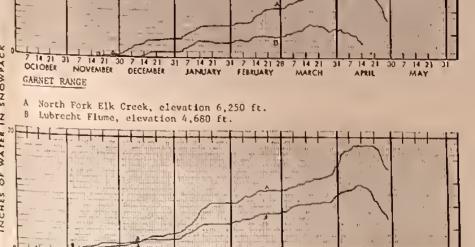
A Divide, elevation 7,800 ft.



A Flattop Mountain, elevation 6,300 ft.

CLACIER NATIONAL PARK

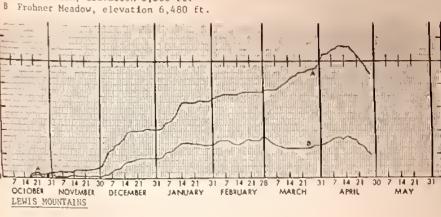
B Many Clacier, elevation 4,900 ft.



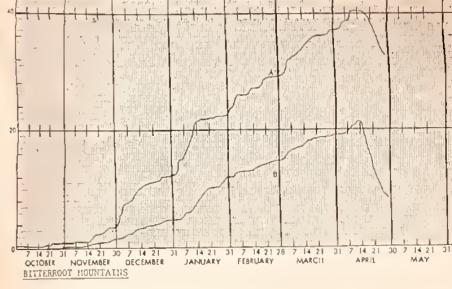
A Rocker Peak, elevation 8,000 ft.

CONTINENTAL DIVIDE

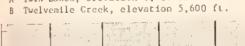
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY

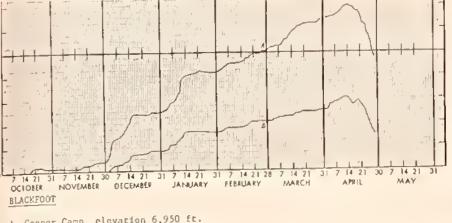


A Mount Lockhart, elevation 6400 ft.

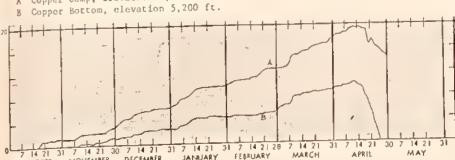


A Twin Lakes, elevation 6,400 ft.





A Copper Camp, elevation 6,950 ft.



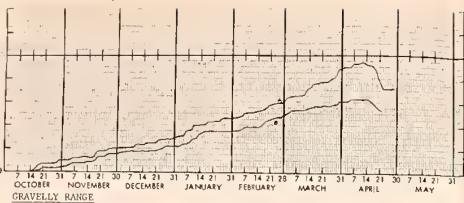
JANUARY FEBRUARY

LITTLE BELT MOUNTAINS A Spur Park, elevation 8,100 ft. B Deadman Creek, elevation 6,450 ft.

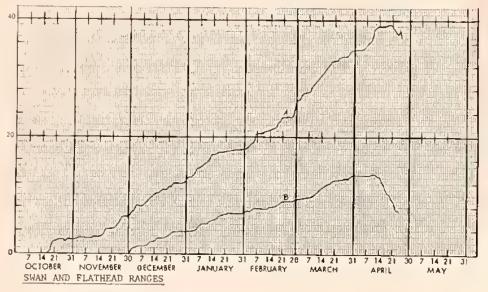
OCIOBER NOVEMBER DECEMBER

(Continued)

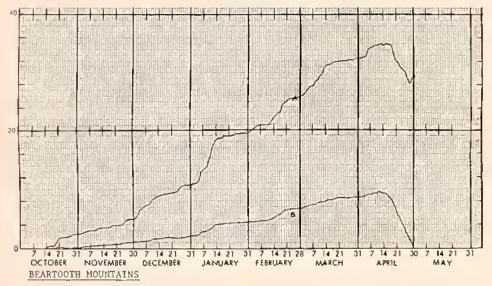
HONTANA WATER SUPPLY OUTLOOK Page 7



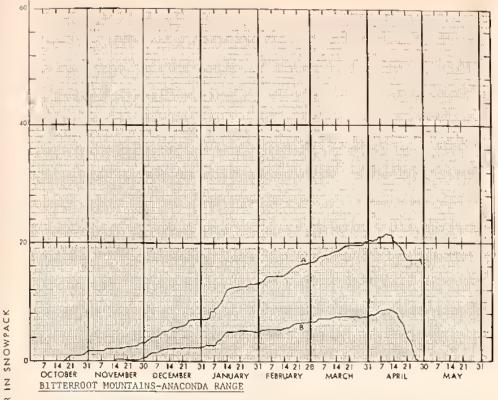
- Clover Meadow, elevation 8,800 ft. Tepee Creek, elevation 8,000 ft.



- Noisy Basin, elevation 6,040 ft. Emery Creek, elevation 4,350 ft.



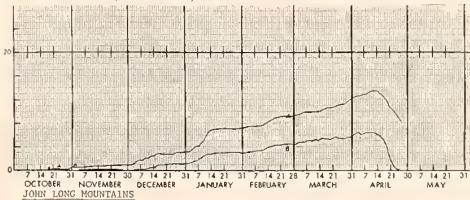
- Fisher Creek, elevation 9,100 ft.
- Northeast Entrance, elevation 7,350 ft.



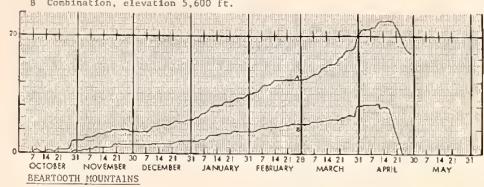
Saddle Mountain, elevation 7,900 ft.

Calvert Creek, elevation 6,430 ft.

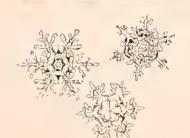
Q



A Black Pine, elevation 7,100 ft.



- A Cole Creek, elevation 7,850 ft.
- Silver Run, elevation 6,630 ft.



AGENCIES & ORGANIZATIONS COOPERATING in Montana Snow Surveys



GOVERNMENT AGENCIES

<u>Canada</u>

Weter Survey of Cenede, Department of the Environment, Celgary Water Resources Service, Department of Lends, Forests, and Weter Resources, British Columbia Alberte Environment, Edmonton, Alberte

United States

DEPARTMENTS DF:

Aimy ----- Corps of Engineers Agriculture -- Forost Service

Soil Conservation Service

Commerce.... National Environmental Satellite Service
National Weather Service

Bonneville Power Administration Bureeu of Indian Affairs Fish & Wildlife Service Geological Survey

Netional Perk Service Weter & Power Resources Service



STATE OF MONTANA

Conservation Districts
Department of Fish, Wildlife & Parks
Department of Natural Resources & Conservation Agricultural Experiment Station University of Montana, School of Forestry Stete Forester

PRIVATE ORGANIZATIONS & INDIVIOUALS

Butte Weter Compeny Montene Power Company The Anaconde Company Big Sky of Montena Jack & Scott Graveley Arthur Christensen Jack Fenton

